



Food and Drug Administration (FDA) and  
 Maryland Center of Excellence in  
 Regulatory Science and Innovation (M-CERSI)  
 Public Workshop:

## Assessing Changes in Pharmacokinetics of Drugs in Liver Disease

October 8, 2020  
 10:00 AM to 4:00 PM  
 Virtual Workshop

### Workshop Agenda

Presentation Title	Time (ET)	Speaker
<b>Introduction</b>		
Welcome and Introduction	10:00am-10:10am	Issam Zineh, FDA
<b>Session 1- Current State: Liver Disease, Hepatic Impairment and Pharmacokinetics (PK)</b>		
<b>Moderator: Martina Sahre, FDA</b>		
Characterizing Impaired Hepatic Function in Liver Disease – Why, How, in Whom?	10:10am-10:25am	Martina Sahre, FDA
Nature of Liver Disease & Pharmacokinetic Alterations	10:25am-10:40am	Naga Chalasani, Indiana University
Pharmacokinetics in Acute Liver Injury	10:40am-10:50am	Paul Hayashi, FDA
Dosing Recommendations in Hepatic Impairment: Challenges and Opportunities	10:50am-11:00am	Tiffany Kaiser, University of Cincinnati
Child-Turcotte-Pugh (CTP) Score	11:00am-11:10am	Guadalupe Garcia-Tsao, Yale
Model for End-stage Liver Disease MELD Score	11:10am- 11:20am	Patrick Kamath, Mayo Clinic
Liver Dysfunction Groups - NCI Organ Dysfunction Working Group Criteria	11:20am-11:30am	Stacy Shord, FDA
Summary & Panel Discussion	11:30am-12:00pm	<b>Panelists:</b>
		Naga Chalasani, Indiana University
		Lara Dimick-Santos, FDA
		Tiffany Kaiser, University of Cincinnati
		Patrick Kamath, Mayo Clinic
		Guadalupe Garcia-Tsao, Yale
<b>Lunch Break</b>		
<b>12:00pm-12:30pm</b>		

**Session 2- New Insights on Identification and Classification of Hepatic Impairment for the Purpose of Assessing PK Changes in Liver Disease**

**Session Moderator:** Insook Kim, FDA

DMET Changes in Progressive NAFLD: Illustrations and Complexities	12:30pm-12:45pm	John Clarke, Washington State University
Impact of Hepatic Impairment on the Pharmacokinetics of Sensitive OATP Substrates: A Case Study	12:45pm-1:00pm	Cara Nelson, Gilead Sciences, Inc
Phenoconversion: Diagnostic Staging in NASH	1:00pm-1:15pm	Nathan Cherrington, University of Arizona
Relevance of Quantifying Global Liver Function and Physiology to Assessing Changes in PK of Drugs in Liver Disease	1:15pm-1:30pm	Steve Helmke, HepQuant
Hepatic Impairment Staging from a Pharmacokinetics Context: Child-Pugh Score and Other Liver Staging Systems	1:30pm-1:45pm	Abhay Joshi, FDA
Summary & Panel Discussion	1:45pm-2:15pm	<b>Panelists:</b>
		John Clarke, Washington State University
		Cara Nelson, Gilead Sciences, Inc
		Nathan Cherrington, University of Arizona
		Greg Everson, HepQuant LLC
		Abhay Joshi, FDA
		Mark Avigan, FDA

**Break** **2:15pm-2:30pm**

**Session 3- Current Status of the Role of Physiologically Based Pharmacokinetic (PBPK) Modeling in Characterizing the PK of Drugs in Hepatic Impairment**

**Moderator:** Xinyuan (Susie) Zhang, FDA

Applications of Hepatic Impairment PBPK in Regulatory Submissions	2:30pm-2:45pm	Ying-Hong Wang, FDA
Physiologically Based Pharmacokinetic Modeling to Support Dosing Recommendations for Patients with Hepatic Impairment: A Readout from the IQ Consortium	2:45pm-3:00pm	Stephen D. Hall, Eli Lilly and Co
PBPK Modeling to Predict PK in Patients with Liver Impairment	3:00pm-3:15pm	Viera Lukacova, Simulations Plus, Inc
Summary & Panel Discussion	3:15pm-3:45pm	<b>Panelists:</b>
		Ying-Hong Wang, FDA
		Stephen D. Hall, Eli Lilly and Co
		Viera Lukacova, Simulations Plus, Inc
		Frank Anania, FDA

**Closing Remarks**

Summary & Future Steps	3:45pm-4:00pm	Joga Gobburu, University of Maryland
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